

AUTO-EXPLORER 1.2M X-Band



X-Band Satellite Communications Terminals

- Rapid Deployment
- Lightweight Transportability
- Auto-Acquisition
- Secure Communications
- Range of Modem Options
- Ruggedized Design
- Ease of Operation
- XTAR or DSCS Compatible

Description

Globecomm Systems Auto-Explorer Multimedia Transportable Satellite Communications Terminals provide high-bandwidth, cost-effective two-way communications designed to meet the demands of military units, governmental agencies, corporations, and other organizations to extend the reach of their networks to remote locations where traditional telecommunications infrastructure is either inadequate or non-existent. Applications include voice, fax, data, video, Internet and LAN-to-LAN connections.

Features:

- Lightweight and highly transportable
- Set-up and operation in less than 15 minutes by one person
- Automatic satellite acquisition with GPS/Compass/Level sensors
- Auto Acquisition via GEO and SNR Method
- Off-grid operation up to approx 1- hour is possible with the (optional) environmentally sealed battery module
- Proven Globecomm Systems Inc. performance, quality and reliability
- Ka-Band Capable
- Range of Modem Options

Meets the demands of military units, governmental agencies, corporations, and other organizations to reach remote locations

Specifications

General Specifications

Parameter	Specification
Input Power	90-260 VAC 47-63Hz auto-ranging 375-Watts Typical

Modem & Integration Options

The X-Band Auto-Explorer offers flexibility in terms of modem options and modem integration options.

Modem Options

- SCPC
- iDirect
- SCPC with Vipersat Option

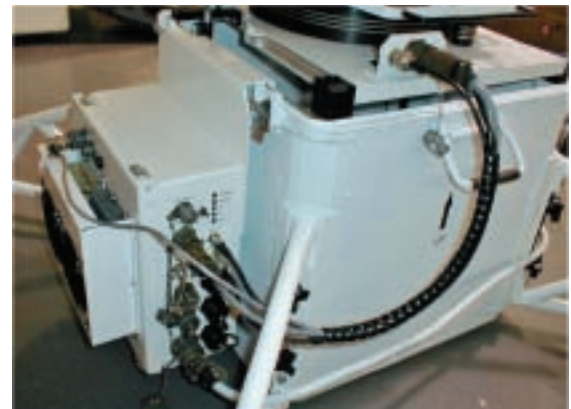
Modem Integration Options

- Environmentally Controlled Outdoor Unit (ODU)
- Rack Mounted Modem in Transit Case

Typical Transit Case with iDirect Modem



Typical Outdoor Unit with SCPC Modem



Typical SCPC Modem Specifications

Parameter	Specification
Data Rates	2.4 kbps to 9.98 Mbps
Modulation types	BPSK, QPSK, OQPSK, 8-PSK, 8-QAM, 16-QAM
Forward Error Correction	Turbo Product Code (TPC), Viterbi, Reed-Solomon, and Trellis Coded Modulation (TCM)
Acquisition Time	64 kbps, Rate 1/2 QPSK: 150 ms average

Graphical User Interface Features (Terminal Management System)

- Simple "At-A-Glance" overview screen indicating the overall terminal status
- Detailed monitoring of all available equipment elements
- Detailed log of all events and commands
- Simple One-Click acquisition and stow functions
- Sub-system level detailed status screens

Terminal Management System Overview Screen



Specifications

RF Specifications		
Parameter	Receive	Transmit
RF Frequency	7.25 to 7.75 GHz	7.9 to 8.4 GHz
IF Frequency	950 to 1450 MHz	
Gain (Mid-band)	36.8 dBi	38.4 dBi
VSWR	1.30:1	1.30:1
Axial Ratio	1.5 dB	1.5 dB
Radiation Pattern Compliance	MIL-STD-188-164A	
Antenna Noise Temperature	43° K at 30° Elevation	
G/T at 20 deg el, +23 C, 45 K LNB, Mid-Band:	16.2 dB/K	
EIRP with 25W1 BUC, P1dB, Midband	51.3 dBW	
Polarization	Circular. Field switchable polarization sense for RH Transmit-LH Receive or LH Transmit-RH receive	
TX to RX Isolation	110 dB	
RX to TX Isolation	110 dB	

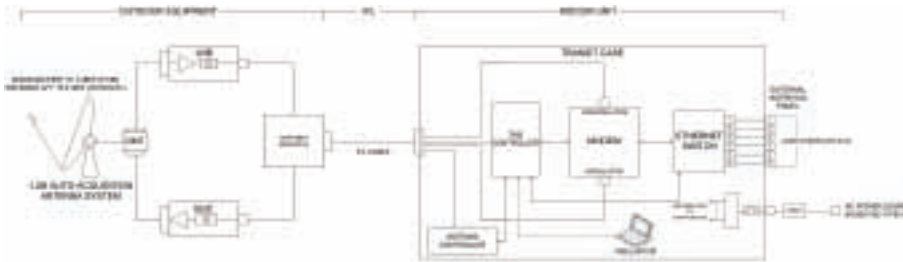
¹ 50W BUC Available as an Option

Antenna Mechanical Specifications	
Azimuth & elevation Drive System	Patented Roto-Lok® Cable Drive System
Reflector Segments	Four Segments
Travel	Azimuth: 400° Elevation: True elevation readout from calibrated inclinometer
Speed	Mechanical: 10° to 90° of reflector boresight Slewing/Deploying 8°/sec in Azimuth, 5°/sec in Elevation, Peaking 0.2°/second
Motors	24V DC Variable Speed with Optical Encoders
Waveguide	UG 112 Cover Flange at Feed Interfaces
Manual Drive	Hand-crank on Azimuth & Elevation or with hand held controller

System Mechanical Specifications (Outdoor Unit Configuration)						
Case Description (Contents)	Weight (lbs)	L"	W"	H"	Volume(Ft3)	
Pedestal Case Antenna Pedestal Assembly Satellite Acquisition Assembly	115	20	20	20	4.6	
Reflector Case Antenna Panels (X4) Pedestal Support Legs (x4) Reflector Interface Bracket	130	52	20	37	22.3	
Electronics Case Feed Assembly with BUC/LNB & ODU	172	54	27	24	20	
TOTAL WEIGHT/VOLUME	417				47	

Environmental Specifications	
Parameter	Specification
Temperature	-30 to 55° C (Operational) -40 to 70° (Storage)
Humidity	up to 100% (Condensing)
Wind	25 mph gusting to 45 mph (Operational)
Altitude	10,000ft/3048 meters (Operational) 40,000ft/12192 meters (Storage)
Sand/Dust	Method 510.4 per MIL-STD-810F
Transportation	Method 514.5 per MIL-STD-810F

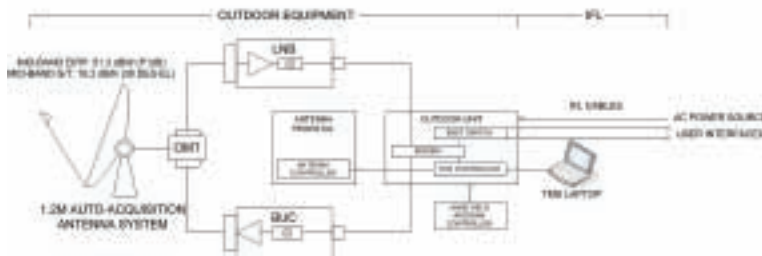
Block Diagram of Typical Configuration with Indoor Modem



Additional Options

- Higher Power Block Upconverter 50 Watts
- Field Spares Kits
- Custom IFL Lengths
- Custom User Interface Configurations
- Custom Transit Case configurations and Integration for Customer Furnished Equipment
- Battery Backup Unit
- Ka-Band Upgrade Kit

Block Diagram of Typical Configuration with Outdoor Unit



About Globecomm

Globecomm Systems Capabilities Include:

- Traffic Analysis
- Network Analysis, Design and Implementation
- Earth Station Analysis, Design and Installation
- Earth Station Products
- Network Management Systems
- Training and Customer Support
- Operations and Maintenance

Globecomm Systems Equipment and Services Include:

- Intelsat Standard A Gateways
- Modular Building Block Gateways
- Military and Commercial Portable Communications Systems
- System Engineering and Application
- Network Monitor & Control
- Hub Earth Stations



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